APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
ELLIS, RICHARD L

ART UNIT	PAPER NUMBER
2183	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N●●●● 09/750,095	Applicant(s) JOURDAN ET AL.
	Examiner Richard Ellis	Art Unit 2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

     a)☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____.

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.   6)☐ Other: .

1.   Claims 1-22 are presented for examination.

2.   The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The current title is imprecise.

3.   Claims 6 and 9-10 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3.1.   The following terms lack proper antecedent basis:

3.1.1. "said misprediction condition" claim 9. It will be assumed that applicant intended to refer to the recited <u>exception</u> condition from claim 8, and not to an unrecited misprediction condition. Claim 10 inherits this rejection by being dependent upon claim 9.

3.2.   The scope of meaning of the following terms are unclear:

3.2.1. "reclaims mispredicted said allocated physical registers" claim 6; This statement does not make proper grammatical sense due to the location of the word "said".

3.3.   The claim language would be improved by making the following changes:

3.3.1.

4.   The following is a quotation of the appropriate paragraphs of 35 USC § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b)   the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5.   Claims 1-22 are rejected under 35 USC § 102(b) as being clearly anticipated by Yeager et al., U.S. Patent 5,758,112.

Yeager et al. taught (e.g. see figs. 1-9b) the invention as claimed (as per claim 1), including a data processing ("DP") system comprising:

5.1.   a processor (fig. 1);

5.2.   a physical register file populated by a number of registers (302, 306);

5.3.   an instruction decoder (200);

5.4.   a register alias table coupled to the instruction decoder (figs. 1-2, 204, 206);

5.5.   an active list (212) populated by a number of entries (col. 15 lines 38-54), the entries include an old field (282) and a new field (256); and,

5.6.   a free list (210) of unallocated physical registers reclaimed from said active list (col. 16 lines 9-14).

6.   As to claim 2, Yeager et al. taught an instruction window buffer having dispatched instructions (300, 304, col. 3 lines 52-55, and col. 15 lines 40-44).

7.   As to claim 3, Yeager et al. taught that the dispatched instructions correlate to evicted allocated physical registers (col. 7 lines 54-63), said free list reclaims said evicted physical registers when said dispatched instructions retire (col. 16 lines 1-14).

8.   As to claim 4, Yeager et al. taught that the instruction writes to said allocated physical register (col. 7 lines 40-43 and 50-63).

9.   As to claim 5, Yeager et al. taught that the allocated physical register was allocated from the free list (col. 7 lines 40-43).

10.   As to claim 6, Yeager et al. taught a misprediction condition wherein the free list reclaimed mispredicted said allocated physical registers from said new field (col. 16 lines 30-33).

11.   As to claim 7, Yeager et al. taught a bit field (286) within said active list, said bit field comprising at least one bit to indicate whether the instruction is retired correctly (col. 15 lines 61-67).

12.   As to claim 8, Yeager et al. taught:

12.1.   a method for recovering registers in a processor (col. 2 lines 40-42);

12.2.   detecting an exception correlating to an instruction associated with an entry on an active list (col. 16 lines 14-19);

12.3.   moving a pointer on said active list to an old field and a new field after said entry (col. 16 lines 30-36); and,

12.4. reclaiming allocated physical registers in said new field to a free list (col. 16 lines 37-50).

13.   As to claim 9, Yeager et al. taught further comprising flushing instructions in an instruction window buffer after said instruction associated with said [exception] condition (col. 15 lines 44-49).

14.   As to claim 10, Yeager et al. taught overwriting entries in said active list (col. 16 lines 30-50).

15.   As to claim 11, Yeager et al. taught allocating unallocated physical registers from said free list to a register alias table (col. 7 lines 50-54).

16.   As to claim 12, Yeager et al. taught moving evicted physical registers from said register alias table to said active list (col. 7 lines 54-57).

17.   As to claim 13, Yeager et al. taught:

17.1. a method for recovering registers in a processor (col. 2 lines 40-42);

17.2. reading a bit in an active list (col. 15 line 61 to col. 16 line 14);

17.3. reclaiming a physical register from said active list to a free list according to said bit (col. 16 lines 1-14).

18.   As to claim 14, Yeager et al. taught overwriting an entry in said active list (col. 16 lines 30-50).

19.   As to claim 15, Yeager et al. taught setting said bit during a misprediction condition (col. 17 lines 26-50).

20.   As to claim 16, Yeager et al. taught reclaimed included reading said physical register from an old field in said active list (col. 16 lines 37-50).

21.   As to claim 17, Yeager et al. taught that reclaiming included reading said physical register from a new field in said active list (col. 16 lines 37-50).

22.   As to claim 18, Yeager et al. taught that the reading included reading a bit in a bit field within said active list (col. 16 lines 1-14).

23.   As to claim 19, Yeager et al. taught:

23.1. A register renaming apparatus within a processor (figs. 1 and 2);

23.2. a register alias table (fig. 1, 204, 206);

23.3. a first set of registers renamed by said register alias table (302, 306);

23.4. an active list having an old field and a new field that correlate to said registers (212); and,

23.5. a free list comprising a second set of registers reclaimed from said active list (208, 210).

24. As to claim 20, Yeager et al. taught that said first set of registers correlate to non-retired instructions (col. 15 lines 38-44, col. 16 lines 1-14).

25. As to claim 21, Yeager et al. taught that said active list included a bit field (fig. 2, 286).

26. As to claim 22, Yeager et al. taught a pointer for said active list (col. 19 lines 14-19).

27. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

28. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 USC 133, MPEP 710.02, 710.02(b)).

29. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Richard Ellis whose telephone number is (703) 305-9690. The Examiner can normally be reached on Monday through Thursday from 7am to 5pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Eddie Chan, can be reached on (703) 305-9712. The fax phone number for the USPTO is: (703)872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Richard Ellis
December 8, 2003

RICHARD L. ELLIS
PRIMARY EXAMINER